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EXAMINER	
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ART UNIT	PAPER NUMBER
2612	

DATE MAILED: 08/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/056,537	GAMMENTHALER, ROBERT S.	
	Examiner	Art Unit	
	Gary C. Vieaux	2612	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *20 May 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-26* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-26* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *01 April 2002* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Amendment

The Amendment filed May 20, 2005 has been received and made of record. In response to the first Office Action, the specification, as well as claims 1, 8 and 13, have been amended. Claims 20-26 have been added.

Response to Amendment

In response to Applicant's amended Specification, the Examiner finds the amendment directly addresses the previous inconsistencies regarding the spelling of "tape" and the reference to the XFL, a now defunct professional football league, and therefore, these objections are hereby withdrawn.

In response to Applicant's amended claims 8 and 13, the Examiner finds the amendment directly addresses the insufficiencies regarding antecedent basis, and therefore, the objections to claims 8 and 13 are hereby withdrawn.

Response to Arguments

Applicant's arguments filed May 20, 2005, have been fully considered but they are not persuasive.

Regarding claim 1, Applicant submits that the Hill reference (US 5,497,419) does not disclose or suggest a compression circuit for compressing composite live digital

video data which is merged video data and status data (Remarks, p.22.) The Examiner respectfully disagrees.

Applicant presents the position that Hill only discloses a method and apparatus for recording sensor data where only video signals are compressed, not signals from sensors (Remarks, p. 22.) However, column 9, lines 7-15, of Hill is clearly found to disclose the compression of data which is both video and status data:

> "In specific application, the microprocessor of the signal processing circuit 34 receives the data containing header, video and sensor data according to the file format 60 (see FIG. 2). As the data are received, the microprocessor applies a compression algorithm, such as the LWZ algorithm, to the received data and stores the data in compressed form in the dynamic RAM. The microprocessor then applies an encryption algorithm to the stored data and transfers the resulting encrypted and compressed data to the mass storage device 30 through the bus 32." (Emphasis added.)

Further support for this position is found via Figure 2, which is a schematic diagram of the structure of the data file 60, which contains header data 62, video data 64 and sensor data 66 (col. 7 lines 38-46.) Based on the foregoing, it is clear that Hill discloses the compression of data, data which, as indicated by Figure 2, includes both video and sensor data, and therefore, the Examiner respectfully stands behind the 35 U.S.C §103(a) rejection to claim 1.

Regarding claims 2-3 and 7, each depends directly from independent claim 1, and thus inherits all the limitations of independent claim 1. Consequently, based on

their dependence and the foregoing response to arguments relating to claim 1, the Examiner respectfully stands behind the 35 U.S.C. §103(a) rejections to claims 2-3 and 7.

Regarding claims 4-5, 8-10, 12, and 15, claims 4-5 depends from independent claim 1, and thus inherits all the limitations of independent claim 1. Claim 8 includes limitations similar to that of claim 1 regarding the compression of composite live digital video data, with claims 9-10, 12, and 15 depending either directly or indirectly from claim 8, and thus inheriting all the limitations of independent claim 8. Consequently, based on the foregoing response to arguments relating to claim 1, the Examiner respectfully stands behind the 35 U.S.C. §103(a) rejections to claims 4-5, 8-10, 12, and 15.

Regarding claim 6, claim 6 depends directly from independent claim 1, and thus inherits all the limitations of independent claim 1. Consequently, based on its dependence and the foregoing response to arguments relating to claim 1, the Examiner respectfully stands behind the 35 U.S.C. §103(a) rejection to claim 6.

Regarding claim 11, claim 11 depends directly from independent claim 8, and thus inherits all the limitations of independent claim 8. Consequently, based on its dependence and the foregoing response to arguments relating to claim 1, of which claim 8 is similar, the Examiner respectfully stands behind the 35 U.S.C. §103(a) rejection to claim 11.

Regarding claims 13-14, claims 13-14 either depend directly or indirectly from independent claim 8, and thus inherits all the limitations of independent claim 8.

Consequently, based on their dependence and the foregoing response to arguments relating to claim 1, of which independent claim 8 is similar, the Examiner respectfully stands behind the 35 U.S.C. §103(a) rejections to claims 13-14.

Regarding claims 16-19, claim 16 includes limitations similar to that of claim 1 regarding the compression of composite live digital video data, with claims 17-19 depending directly from claim 16, and thus inheriting all the limitations of independent claim 16. Consequently, based on the dependence of claims 17-19 and the foregoing response to arguments relating to claim 1, of which claim 16 is similar, the Examiner respectfully stands behind the 35 U.S.C. §103(a) rejections to claims 16-19.

Claim Rejections

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-3 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hill (US 5,497,419) in view of Rayner (US 6,389,340), in view of Squicciarini et al. (US 5,408,330.)

Regarding claim 1, Hill is found to teach an in-car video recording apparatus comprising a video camera (fig. 3 indicator 22; col. 4 lines 59-64), a microphone (col. 5 lines 20-25, in which audio capture is provided), an input for receiving status data (fig. 3

indicator 50), a base unit (fig. 3 indicator 24;col. 8 lines 18-24) comprising means for receiving the output signal of said video camera and preparing said output signal for compression (fig. 3 indicator 36; col. 8 lines 57-65), a buffer and merge circuit functioning to merge (col. 9 lines 37-42) said status data with the frames of video data output by said means for receiving to generate composite digital video data, and for buffering the resulting composite digital video data (fig. 3 indicators 34 and 36; col. 8 line 60 – col. 9 line 15), a compression circuit for compressing said composite live digital video data stored in said buffer using any compression algorithm, and for compressing said audio data using any compression algorithm (fig. 1 indicator 36; col. 9 lines 7-15; although not explicitly stated, the compression of the audio data is found to occur as demonstrated by later decompression of the audio signal, col. 11 lines 47-52), and a means for recording said frames of compressed video data and said audio data (fig. 3 indicator 30; col. 8 lines 51-56.) Hill further teaches a corresponding apparatus for playback of the data (fig. 6 indicator 142) which includes video display means (fig. 6 indicator 150; col. 11 lines 10-13), a speaker (fig. 6 indicator 152; col. 11 lines 10-13), a display means for displaying status information (fig. 6 indicator 154; col. 11 lines 10-13), and means (fig. 6 indicator 155; col. 11 lines 14-19) for controlling a base unit (fig. 6 indicator 142) coupled to said display means (fig. 6 indicator 150) and said speaker (fig. 6 indicator 152.) Because Hill also teaches the potential of a real-time recording and playback system (col. 10 lines 47-48), it would have been obvious to one of ordinary skill in the art at the time of the invention to integrate the two separate units taught by Hill, into one single unit in order to eliminate the need to physically transfer the hard disk

between units, to provide for recording and playback of video and audio data in a single location, and to provide for real-time playback of the video and audio data so that the user, or an observer, may observe the events live, while they are also being recorded.

The combined recording/playback apparatus of Hill is not however, found to expressly teach a display means for displaying control information, an analog-to-digital converter coupled to convert audio signals from said microphone to digital data to be compressed, or means for controlling said base unit of the recording portion of the apparatus.

Rayner is found to teach a similar in-car video recording apparatus that explicitly teaches an analog-to-digital converter (fig. 3 indicator 46) coupled to convert audio signals from said microphone (fig. 3 indicator 44) to digital data (col. 4 lines 38-30.) It would have been obvious to one of ordinary skill in the art at the time of the invention to include analog-to-digital conversion of a microphone audio signal as taught by Rayner, with the in-car video recording apparatus as taught by Hill, so that the information converted may also be digitally compressed and recorded.

Further, Squicciarini is also found to teach a similar in-car video recording apparatus, which provides a teaching of live video data (col. 4 lines 55-57) as well as provides a teaching of not only a display means for displaying status and control information (figs. 1 and 2 indicator 14), but also means for controlling said base unit (fig. 1 indicator 16; col. 6 lines 12-24) coupled to said display means (fig. 1) and said speaker (col. 7 lines 34-36.) It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teaching of Squicciarini, with the in-car

video recording apparatus as taught by Hill and Rayner, so that important data such as vehicle speed, date and time is easily viewable on both the live display and the recorded data, as well as so that the base unit may effectively be controlled during playback , e.g. play, rewind, forward-fast.

Regarding claim 2, Hill, Rayner and Squicciarini teach all the elements of claim 2 (see the 103(a) rejection to claim 1 supra) including teaching an apparatus further comprising local playback means for receiving said composite live digital video from said buffer and merge circuit ('330 - fig. 1 indicators 14) and for displaying at least said video frames from said video camera along with a selected number of items of said status data on a video display ('419 – fig. 5 indicator 84, col. 10 lines 52-54; '330 - fig. 2 indicator 22, col. 7 lines 10-18, col. 9 line 65 – col. 10 line 2) and for playing audio captured by a microphone ('330 – col. 5 lines 52-65; '419 col. 5 lines 20-25) on a speaker ('330 – col. 7 lines 34-51; '419 – fig. 6 indicator 152.)

Regarding claim 3, Hill, Rayner and Squicciarini teach all the elements of claim 3 (see the 103(a) rejection to claim 1 supra) including teaching an apparatus further comprising an anti-tampering means coupled to receive compressed data and for tamper proofing said data to generate tamper proof data and recording said tamper proof data on said means for recording ('419 - col. 9 lines 9-15.)

Regarding claim 7, Hill, Rayner and Squicciarini teach all the elements of claim 7 (see the 103(a) rejection to claim 1 supra) including teaching an apparatus wherein said microphone is a wireless microphone ('330 – fig. 1 indicator 28; col. 5 lines 52-65) and said base unit includes a receiver to receive and demodulate radio frequency signals

from said wireless microphone to develop an audio signal and apply the audio signal to said analog-to-digital converter ('330 - fig. 1 indicator 30).

Claims 4, 5, 8-10, 12, 15 and 20-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hill (US 5,497,419) in view of Rayner (US 6,389,340), in view of Squicciarini et al. (US 5,408,330), in further view of Swanson et al. (US 5,689,442.)

Regarding claim 4, Hill, Rayner and Squicciarini teach all the elements of claim 4 (see the 103(a) rejection to claim 1 supra) except for teaching an apparatus wherein said means for recording comprises a hard disk and a digital video cassette recorder coupled to said hard disk and functioning to archive compressed digital and audio data from said hard disk so as to make more capacity on said hard disk.

Nevertheless, Swanson is found to teach a similar in-car video recording apparatus, which teaches an apparatus wherein said means for recording comprises a hard disk and tape based data storage device coupled to said hard disk and functioning to archive compressed digital and audio data from said hard disk so as to make more capacity on said hard disk (fig. 1 indicator 92; col. 7 lines 52-63.) It would have been obvious to one of ordinary skill in the art at the time the invention was made to couple a tape based data storage device with the hard disk of the apparatus as taught by Hill, Rayner and Squicciarini, in order to allow for transfer of data from the hard disk to the tape based data storage device for creation of additional space on the originating hard disk or to back-up information resident on the hard disk.

Regarding claim 5, Hill, Rayner and Squicciarini teach all the elements of claim 5 (see the 103(a) rejection to claim 2 supra) except for teaching an apparatus wherein said means for recording comprises a hard disk and a digital video cassette recorder coupled to said hard disk and functioning to archive compressed digital and audio data from said hard disk so as to make more capacity on said hard disk, and wherein said local playback means includes a decompression and selection circuit coupled to receive selected data at least from said hard disk, decompress said data and play the decompressed video and audio. However, Hill, Rayner and Squicciarini are found to teach an apparatus wherein said local playback means includes a decompression circuit coupled to receive data at least from said hard disk, decompress said data and play the decompressed video and audio ('419 – figs. 6 and 7.)

As to an apparatus wherein said means for recording comprises a hard disk and a digital video cassette recorder coupled to said hard disk and functioning to archive compressed digital and audio data from said hard disk so as to make more capacity on said hard disk, Swanson is found to teach a similar in-car video recording apparatus, which teaches an apparatus wherein said means for recording comprises a hard disk and tape based data storage device coupled to said hard disk and functioning to archive compressed digital and audio data from said hard disk so as to make more capacity on said hard disk (fig. 1 indicator 92; col. 7 lines 52-63.) It would have been obvious to one of ordinary skill in the art at the time the invention was made to couple a tape based data storage device with the hard disk of the apparatus as taught by Hill, Rayner, and Squicciarini, in order to allow for transfer of data from the hard disk to the tape based

data storage device for creation of additional space on the originating hard disk or to back-up information resident on the hard disk. It is also noted that Swanson is found to teach the hard disk employable for random access of data to allow previously recorded frames of event information to be accessed (col. 7 lines 36-44; col. 11 lines 51-59.) It would have been obvious to one of ordinary skill in the art at the time of the invention to provide for the selection of digital data for local playback from the hard disk as taught by Swanson, with the playback functionality, which includes decompression of data, of the apparatus as taught by Hill, Rayner, Squicciarini and Swanson, so that previously recorded data may not only be easily accessed due to random access storage utility, but also be accessed while continuing to simultaneously record current data.

Regarding claim 8, Hill is found to teach an apparatus comprising a video camera (fig. 3 indicator 22; col. 4 lines 59-64), a microphone (col. 5 lines 20-25, in which audio capture is provided), an input for receiving status data (fig. 3 indicator 50), a base unit (fig. 3 indicator 24;col. 8 lines 18-24) comprising means for receiving the output signal of said video camera and preparing said output signal for compression (fig. 3 indicator 36; col. 8 lines 57-65), a buffer and merge circuit functioning to merge (col. 9 lines 37-42) said status data with the frames of video data output by said means for receiving to generate composite digital video data, and for buffering the resulting composite digital video data (fig. 3 indicators 34 and 36; col. 8 line 60 – col. 9 line 15), a compression circuit for compressing said composite live digital video data stored in said buffer using any compression algorithm, and for compressing said audio data using any

compression algorithm (fig. 1 indicator 36; col. 9 lines 7-15; although not explicitly stated, the compression of the audio data is found to occur as demonstrated by later decompression of the audio signal, col. 11 lines 47-52), anti-tampering means for receiving said compressed video and audio data and rendering it tamper proof (fig. 3 indicator 34; col. 9 lines 7-13), and a hard disk for recording whatever data is output by said anti-tampering means (fig. 3 indicator 30; col. 8 lines 51-56; col. 9 lines 13-15.) Hill further teaches a corresponding apparatus for playback of the data (fig. 6 indicator 142) which includes video display means (fig. 6 indicator 150; col. 11 lines 10-13), a speaker (fig. 6 indicator 152; col. 11 lines 10-13), a display means for displaying status information (fig. 6 indicator 154; col. 11 lines 10-13), and means (fig. 6 indicator 155; col. 11 lines 14-19) for controlling a base unit (fig. 6 indicator 142) coupled to said display means (fig. 6 indicator 150.) Because Hill also teaches the potential of a real-time recording and playback system (col. 10 lines 47-48), it would have been obvious to one of ordinary skill in the art at the time of the invention to integrate the two separate units taught by Hill, into one single unit in order to eliminate the need to physically transfer the hard disk between units, to provide for recording and playback of video and audio data in a single location, and to provide for real-time playback of the video and audio data so that the user, or an observer, may observe the events live, while they are also being recorded.

The combined recording/playback apparatus of Hill is not however, found to expressly teach a display means for displaying control information, an analog-to-digital converter coupled to convert audio signals from said microphone to digital data to be

compressed, means for controlling said base unit of the recording portion of the apparatus, means for detecting sync intervals in said frames of video data output by said means for receiving and outputting a frame signal, and for receiving at least frame number data that increments with each received frame and merging said frame number data into said composite live digital video data stream, or a frame counter for receiving said frame signal and for incrementing a frame count each time said frame signal is received and for supplying said frame count data as status data to said buffer and merge circuit.

Rayner is found to teach a similar apparatus that explicitly teaches an analog-to-digital converter (fig. 3 indicator 46) coupled to convert audio signals from said microphone (fig. 3 indicator 44) to digital data (col. 4 lines 38-30.) It would have been obvious to one of ordinary skill in the art at the time of the invention to include analog-to-digital conversion of a microphone audio signal as taught by Rayner, with the apparatus as taught by Hill, so that the information converted may also be digitally compressed and recorded.

Further, Squicciarini is also found to teach a similar apparatus, which provides a teaching of live video data (col. 4 lines 55-57) as well as provides a teaching of not only a display means for displaying status and control information (figs. 1 and 2 indicator 14), but also means for controlling said base unit (fig. 1 indicator 16; col. 6 lines 12-24) coupled to said display means (fig. 1.) It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teaching of Squicciarini, with the apparatus as taught by Hill and Rayner, so that important data such as vehicle

speed, date and time is easily viewable on both the live display and the recorded data, as well as so that the base unit may effectively be controlled during playback , e.g. play, rewind, forward-fast.

Finally, Swanson is found to teach a similar apparatus, which in order to keep track of when certain frames of images are acquired, maintains a timer and time stamps each frame of event information comprising images (col. 6 lines 40-47.) It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Swanson, employing a timer as a frame counter and the corresponding time stamp of each frame as frame count data/frame number data of each individual frame which is to be included with the data to be tamper-proofed and stored, within the base unit as taught by Hill, Rayner and Squicciarini, so that the time stamp on each frame can serve the dual purposes of both fixing the exact time of the imaging, as well as serving as status data by delineating the exact order of the imaging.

Regarding claim 9, Hill, Rayner, Squicciarini, and Swanson teach all the elements of claim 9 (see the 103(a) rejection to claim 8 supra) including teaching an apparatus further comprising local playback means for receiving said composite live digital video from said buffer and merge circuit ('330 - fig. 1 indicators 14) and for displaying at least said video frames from said video camera along with a selected number of items of said status data on a video display ('419 – fig. 5 indicator 84, col. 10 lines 52-54; '330 – fig. 2 indicator 22, col. 5 line 13 – col. 6 line 24, col. 7 lines 10-18, col. 9 line 65 – col. 10 line 2) and for playing audio captured by a microphone ('330 – col. 5 lines 52-65; '419 – col. 5 lines 20-25) on a speaker ('330 – col. 7 lines 34-51; '419

– fig. 6 indicator 152), or for receiving compressed digital and audio data recorded on said hard disk and for decompressing said video and audio data and playing video images on said video display and sound from said decompressed data on said speaker ('419 – figs. 5, 6 and 7).

Regarding claim 10, Hill, Rayner, Squicciarini, and Swanson teach all the elements of claim 10 (see the 103(a) rejection to claim 9 supra) including teaching an apparatus further comprising means for displaying in real time ('419 – col. 10 line 47; '330 – col. 4 lines 56-57, col. 5 lines 57-59; '442 – col. 11 lines 48-51) images and sound captured by video camera and microphone as well as status data ('419 – col. 10 lines 52-54, col. 5 lines 20-25; '330 - col. 5 lines 13-16; '442 – col. 3 lines 48-52, col. 11 lines 48-51.)

Regarding claim 12, Hill, Rayner, Squicciarini, and Swanson teach all the elements of claim 12 (see the 103(a) rejection to claim 8 supra) including teaching an apparatus wherein said system controller also includes a clock and supplies time of day data to said buffer and merge circuit as status data ('419 – fig. 3 indicator 34, fig. 5, col. 9 lines 1-13; '330 - fig. 1 indicator 36, col. 6 lines 39-46; '442 – col. 6 lines 43-45), and wherein said buffer and merge circuit functions to merge said time of day data into said composite live video data stream ('419 - col. 9 lines 54-62.)

Regarding claim 15, Hill, Rayner, Squicciarini, and Swanson teach all the elements of claim 15 (see the 103(a) rejection to claim 8 supra) including teaching an apparatus wherein said microphone is a wireless microphone ('330 – fig. 1 indicator 28; col. 5 lines 52-65) and said base unit includes a receiver to receive and demodulate

radio frequency signals from said wireless microphone to develop an audio signal and apply the audio signal to said analog-to-digital converter ('330 - fig. 1 indicator 30.)

Regarding claims 20-26, although the wording is different, the material is considered substantively equivalent to that covered in claim 9 and independent claim 8 from which dependence is derived, as discussed above.

Claims 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hill (US 5,497,419) in view of Rayner (US 6,389,340), in view of Squicciarini et al. (US 5,408,330), in further view of Monroe (US 6,518,881.)

Regarding claim 6, Hill, Rayner and Squicciarini teach all the elements of claim 6 (see the 103(a) rejection to claim 1 supra) except for teaching an apparatus wherein said video camera is a wireless video camera, and wherein said means for receiving a signal from said video camera includes a receiver for receiving and demodulating radio frequency signals from said video camera and circuitry to develop digital video data suitable for compression from the received radio frequency signals. It is noted that the apparatus of Hill, Rayner and Squicciarini does teach compression of a digital signal ('419 - fig. 1 indicator 36; col. 9 lines 7-15.)

Monroe is found to teach a wireless video camera for use with an in-car recording apparatus (fig. 3 indicator 58; fig. 5 indicator 115) in which means for receiving a signal from said video camera includes a receiver (fig. 5 indicator 120) for receiving and demodulating radio frequency signals from said video camera and circuitry to develop digital video data suitable from the received radio frequency signals

are provided (col. 8 lines 45-67; col. 10 lines 5-18.) It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate a wireless video camera and corresponding receiver as taught by Monroe, with the apparatus which includes signal compression as taught by Hill, Rayner, and Squicciarini, so that the camera may be employed to observe and record activity outside of the vehicle and beyond the range presented by a camera mounted within a vehicle, such as for close-ups of an area adjacent a crime or an accident scene.

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hill (US 5,497,419) in view of Rayner (US 6,389,340), in view of Squicciarini et al. (US 5,408,330), in view of Swanson et al. (US 5,689,442), in further view of Monroe (US 6,518,881.)

Regarding claim 11, Hill, Rayner, Squicciarini, and Swanson teach all the elements of claim 8 (see the 103(a) rejection to claim 8 supra) except for teaching an apparatus wherein said video camera is a wireless video camera, and wherein said means for receiving a signal from said video camera includes a receiver for receiving and demodulating radio frequency signals from said video camera and circuitry to develop digital video data suitable for compression from the received radio frequency signals. It is noted that the apparatus of Hill, Rayner, Squicciarini and Swanson does teach compression of a digital signal ('419 - fig. 1 indicator 36; col. 9 lines 7-15; '442 – col. 11 lines 33-47.)

Monroe is found to teach a wireless video camera for use with an in-car recording apparatus (fig. 3 indicator 58; fig. 5 indicator 115) in which means for receiving a signal from said video camera includes a receiver (fig. 5 indicator 120) for receiving and demodulating radio frequency signals from said video camera and circuitry to develop digital video data suitable from the received radio frequency signals are provided (col. 8 lines 45-67; col. 10 lines 5-18.) It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate a wireless video camera and corresponding receiver as taught by Monroe, with the apparatus which includes signal compression as taught by Hill, Rayner, Squicciarini, and Swanson so that the camera may be employed to observe and record activity outside of the vehicle and beyond the range presented by a camera mounted within a vehicle, such as for close-ups of an area adjacent a crime or an accident scene.

Claims 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hill (US 5,497,419) in view of Rayner (US 6,389,340), in view of Squicciarini et al. (US 5,408,330), in view of Swanson et al. (US 5,689,442), in further view of Alicandro et al. (US 6,606,115.)

Regarding claim 13, Hill, Rayner, Squicciarini, and Swanson teach all the elements of claim 13 (see the 103(a) rejection to claim 9 supra) except for teaching an apparatus wherein local playback means is controlled by said means for controlling as to which items of said status data are overlaid on the displayed video and wherein said local playback means includes an input for receiving compressed video and audio data

and functions to decompress said video and audio data and display the decompressed video data along with zero or more items of selected status data on said display and convert said decompressed audio data to an audio signal and play it on said speaker. However, Hill, Rayner, Squicciarini, and Swanson do provide a teaching for local playback means which include an input for receiving compressed video and audio data ('419 – col. 11 lines 18-38) and functions to decompress said video and audio data and display the decompressed video data along with selected status data on said display and convert said decompressed audio data to an audio signal and play it on said speaker ('419 – figs. 5, 6, and 7.)

When faced with the challenge combining video and status data onto a video display, one of ordinary skill in the art would look to the solutions of others who have dealt with similar challenges. Alicandro presents one such solution, in that types of information, such as date, time and temperature, can be superimposed over the video image being displayed, and moreover, the types of available information displayed is operator selectable (col. 5 lines 9-19.) It would have been obvious to one of ordinary skill in the art at the time of the invention to provide control over the number of items of status data that are overlaid on the video as taught by Alicandro, with the apparatus as taught by Hill, Rayner, Squicciarini, and Swanson, and not just a selected number of items of status data as taught by Hill, Rayner, Squicciarini, and Swanson ('419 – fig. 5 indicator 84), so that status data not considered immediately relevant for viewing does not unnecessarily inhibit any potentially viewable areas of the displayed video. It would have been further obvious to one of ordinary skill in the art at the time of the invention to

include within the local playback means control as to which items of said status data, if any, are overlaid on the displayed video so that the video data displayed is also not unnecessarily inhibited by data which is not immediately relevant, such as unnecessarily displaying speed of a vehicle which has already been pulled over by law enforcement, and in which a fuller access to displayed video may provide a clearer view of any ensuing confrontation by the officer and the operator of the vehicle pulled over.

Regarding claim 14, Hill, Rayner, Squicciarini, and Swanson teach all the elements of claim 14 (see the 103(a) rejection to claim 8 supra) except for teaching an apparatus wherein means for local playback is controlled by said means for controlling as to which items of said status data are overlaid on the displayed video and wherein said means for local playback further comprises an input for receiving compressed video and audio data and said status data recorded on said hard disk and functions to decompress said video and audio data to generate video and audio signals and display said video and audio signals along with zero or more items of selected status data on said display. However, Hill, Rayner, Squicciarini, and Swanson do provide a teaching for local playback means which further comprise an input for receiving compressed video and audio data and said status data recorded on said hard disk ('419 – col. 11 lines 18-38) and functions to decompress said video and audio data to generate video and audio signals and display said video and audio signals along with selected status data on said display ('419 – figs. 5, 6 and 7), as well as teaching the display of a selected number of items of status data ('419 – fig. 5 indicator 84.)

When faced with the challenge combining video and status data onto a video display, one of ordinary skill in the art would look to the solutions of others who have dealt with similar challenges. Alicandro presents one such solution, in that types of information, such as date, time and temperature, can be superimposed over the video image being displayed, and moreover, the types of available information displayed is operator selectable (col. 5 lines 9-19.) It would have been obvious to one of ordinary skill in the art at the time of the invention to provide control over the number of items of status data that are overlaid on the video as taught by Alicandro, with the apparatus as taught by Hill, Rayner, Squicciarini, and Swanson, so that status data not considered immediately relevant for viewing does not unnecessarily inhibit any potentially viewable areas of the displayed video. It would have been further obvious to one of ordinary skill in the art at the time of the invention to include within the local playback means control as to which items of said status data, if any, are overlaid on the displayed video so that the video data displayed is also not unnecessarily inhibited by data which is not immediately relevant, such as unnecessarily displaying speed of a vehicle which has already been pulled over by law enforcement, and in which a fuller access to displayed video may provide a clearer view of any ensuing confrontation by the officer and the operator of the vehicle pulled over.

Claims 16-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hill (US 5,497,419) in view of Rayner (US 6,389,340), in view of Squicciarini et al. (US

5,408,330), in view of Swanson et al. (US 5,689,442), in view of McKain et al. (WO 96/26600), in view of Reaves, III (US 5,225,768.)

Regarding claim 16, Hill is found to teach an apparatus comprising one or more video cameras (fig. 3 indicators 22 and 25; col. 4 lines 59-64), a microphone (col. 5 lines 20-25, in which audio capture is provided), a GPS receiver (fig. 3 indicator 52, col. 8 lines 39-43), an input for receiving status data (fig. 3 indicator 50), a base unit (fig. 3 indicator 24;col. 8 lines 18-24) comprising means for receiving the output signal of said one or more video cameras and preparing said output signal for compression (fig. 3 indicator 36; col. 6 lines 34-38; col. 8 lines 57-65), a buffer and merge circuit functioning to merge (col. 9 lines 37-42) said status data including position data from said GPS receiver (col. 8 lines 39-43) and vehicle speed data (fig. 3 indicator 23; col. 8 lines 35-38) with the frames of video data output by said means for receiving to generate composite digital video data, and for buffering the resulting composite digital video data (fig. 3 indicators 34 and 36; col. 8 line 60 – col. 9 line 15), a compression circuit for compressing said composite live digital video data stored in said buffer using any compression algorithm to generate compressed composite live video data, and for compressing said audio data using any compression algorithm to generate compressed audio data (fig. 1 indicator 36; col. 9 lines 7-15; col. 10 lines 44-56; although not explicitly stated, the compression of the audio data is found to occur as demonstrated by later decompression of the audio signal, col. 11 lines 47-52), a hard disk means for receiving and continuously recording said compressed composite live digital video data along with said compressed audio data (fig. 3 indicator 30; col. 8 lines 51-56; col. 9 lines

3-19.) Hill further teaches a corresponding apparatus for playback of the data (fig. 6 indicator 142) that includes video display means (fig. 6 indicator 150; col. 11 lines 10-13), a speaker (fig. 6 indicator 152; col. 11 lines 10-13), a display means for displaying status information (fig. 6 indicator 154; col. 11 lines 10-13), a hard disk means for receiving an archive signal commanding playback of recorded data (col. 11 lines 8-22), and control means (fig. 6 indicator 155; col. 11 lines 14-19) coupled to said display means (fig. 6 indicator 150) for controlling a base unit (fig. 6 indicator 142.) Because Hill also teaches the potential of a real-time recording and playback system (col. 10 lines 47-48), it would have been obvious to one of ordinary skill in the art at the time of the invention to integrate the two separate units taught by Hill, into one single unit in order to eliminate the need to physically transfer the hard disk between units, to provide for recording and playback of video and audio data in a single location, and to provide for real-time playback of the video and audio data so that the user, or an observer, may observe the events live, while they are also being recorded.

The combined recording/playback apparatus of Hill is not however, found to expressly teach a display means for displaying control information, an analog-to-digital converter means coupled to select one or more outputs from said one or more microphones and convert the selected audio signal(s) from said one or more microphones to generate digital audio data, a buffer and merge circuit to merge lights and siren status data and traffic surveillance radar data and for recognizing a sync signal in the incoming video data and outputting a frame signal, and for receiving a frame count signal and merging said frame count as status data in said composite live

digital video data, playback of recorded data with specification in any way of at least the starting point in the stream recorded data where said playback is to begin, a digital video tape recorder or other removable medium digital data recording device for recording compressed data output by said hard disk means when a record signal is received and control means including at least a frame counter, said control means also coupled to receive said frame signal and for incrementing said frame counter each time said frame signal is received and for supplying said frame count to said buffer and merge circuit as status data.

Rayner is found to teach a similar apparatus that explicitly teaches an analog-to-digital converter means (fig. 3 indicator 46) coupled to select an output from said microphone and convert the selected audio signal from said microphone to generate digital audio data (col. 4 lines 53-54.) It would have been obvious to one of ordinary skill in the art at the time of the invention to include analog-to-digital conversion of a microphone audio signal as taught by Rayner, with the apparatus as taught by Hill, so that the information converted may also be digitally compressed and recorded.

Further, Squicciarini is found to teach a similar apparatus, which provides a teaching of live video data (col. 4 lines 55-57) as well as provides a teaching of not only a display means for displaying status and control information (figs. 1 and 2 indicator 14), but also control means coupled to said display means (fig. 1) for controlling said base unit (fig. 1 indicator 16; col. 6 lines 12-24.) It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teaching of Squicciarini, with the apparatus as taught by Hill and Rayner, so that important data

such as vehicle speed, date and time is easily viewable on both the live display and the recorded data, as well as so that the base unit may effectively be controlled during playback, e.g. play, rewind, forward-fast. Squicciarini also teaches status data employed in law enforcement that includes radar data (fig. 1 indicator 24; fig. 2 indicator 22), a bar code reader (fig. 1 indicator 48) and Breathalyzer (fig. 1 indicator 50.) It would have been obvious to include radar within the status data recorded as taught by Squicciarini, with the apparatus as taught by Hill, Rayner and Squicciarini, in order to attempt to document any and all potential evidence, which if not recorded, may become in dispute during a later trial, in this case automobile speed.

Additionally, Swanson is found to teach a similar apparatus, which in order to keep track of when certain frames of images are acquired, includes a base unit that maintains a timer and time stamps each frame of event information comprising images (col. 6 lines 40-47.) It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Swanson, employing a timer as a frame counter and the corresponding time stamp of each frame as frame count data/frame number data of each individual frame which is to be included with the data to be tamper-proofed and stored, within the base unit as taught by Hill, Rayner and Squicciarini, so that the time stamp on each frame can serve the dual purposes of both fixing the exact time of the imaging, as well as serving as status data by delineating the exact order of the imaging. Swanson is also found to teach a tape based data storage device for recording compressed data output by a hard disk means when a record signal is received (fig. 1 indicator 92; col. 7 lines 52-63.) It would have been obvious to

one of ordinary skill in the art at the time the invention was made to couple a tape based data storage device with the hard disk of the apparatus as taught by Hill, Rayner and Squicciarini, in order to allow for transfer of data from the hard disk to the tape based data storage device for creation of additional space on the originating hard disk or to back-up information resident on the hard disk.

Furthermore, the apparatus of Hill, Rayner, Squicciarini, and Swanson is not found to teach specifying in any way at least the starting point in the stream recorded data where said playback is to begin, but Swanson does indicate the necessity for fast access of locations in the data storage device (col. 7 lines 40-53.) When faced with the problem of accessing recorded data, one of ordinary skill in the art of recording and playback of data would look to the solutions of others faced with similar data access issues. One such solution is presented by McKain, which teaches a recording and reproduction apparatus in which recorded data can be recalled for playback and in which the starting point in the stream recorded data where playback is to begin is specified (p. 14 line 26 – 30, table I.) It would have been obvious to one of ordinary skill in the art at the time of the invention to add the functionality for accessing recorded data as taught by McKain to the apparatus as taught by Hill, Rayner, Squicciarini, and Swanson, so that data may be accessed quickly by a user, without the need to scroll through unnecessary data (via fast-forwarding or reversing) in order to view the desired event data.

Finally, although neither Hill, Rayner, Squicciarini, Swanson nor McKain disclose including lights and siren status data with the video data, Hill, Rayner, and Squicciarini

are each found to teach the inclusion of data which would pertain to a law enforcement incident and would considered pieces of evidence directly related to the captured images and audio, such as radar data ('330 – fig. 1 indicator 24, col. 5 lines 32-36), breathalyzer data ('330 – fig. 1 indicator 48), driver's license bar code reader ('330 – fig. 1 indicator 50), speed of the vehicle ('330 – col. 1 lines 30-33), time and date ('330 – col. 5 lines 26-29), vehicle unit identification number ('330 – col. 5 lines 29-32), g-force ('330 – col. 4 lines 22-24), GPS ('330 – col. 4 line 25), and a turn signal detector ('419 – fig. 3 indicator 20.) Further on these lines of important/relevant information, Reaves is found to teach that lights and siren are also considered relevant evidence worthy of recording (col. 10 lines 38-53.) Based on foregoing teachings relating status data and the recording of light and siren data as taught by Reaves, it would have been obvious to one of ordinary skill in the art at the time of the invention to also include lights and siren status data with the video data with the status data to be recorded by the device of Hill, Rayner, Squicciarini, Swanson and McKain, so that information relevant to determine at what point in time an officer determined the necessity of lights and siren, or if evidence is required to show that lights and siren were even employed at all, would be recorded as potential evidence.

Regarding claim 17, Hill, Rayner, Squicciarini, Swanson, McKain and Reaves teach all the limitations of claim 17 (see the 103(a) rejection to claim 16 supra) including teaching an apparatus further comprising anti-tampering means coupled to receive said compressed data output by said compression means and rendering said compressed

data tamper proof prior to recording on said hard disk means ('419 - fig. 3 indicator 34; col. 9 lines 7-13.)

Regarding claim 18, Hill, Rayner, Squicciarini, Swanson, McKain and Reaves teach all the limitations of claim 18 (see the 103(a) rejection to claim 16 supra) including teaching an apparatus further comprising local playback means for receiving said live digital video from said buffer and merge circuit ('330 - fig. 1 indicators 14) and for displaying at least said video frames from said video camera along with a selected number of items of said status data on a video display ('419 – fig. 5 indicator 84, col. 10 lines 52-54; '330 – fig. 2 indicator 22, col. 7 lines 10-18, col. 9 line 65 – col. 10 line 2) and for playing audio captured by a microphone ('330 – col. 5 lines 52-65; '419 – col. 5 lines 20-25) on a speaker ('330 – col. 7 lines 34-51; '419 – fig. 6 indicator 152.)

Regarding claim 19, Hill, Rayner, Squicciarini, Swanson, McKain and Reaves teach all the limitations of claim 19 (see the 103(a) rejection to claim 16 supra) including teaching an apparatus further comprising local playback means for receiving said live digital video from said buffer and merge circuit ('442 – col. 11 lines 48-51) and recorded, compressed video, status and audio data from said hard disk means ('419 – col. 11 lines 8-39; '442 – col. 11 lines 48-54) or said digital video tape recorder and for selection of one source of video, status and audio data under control of said control means ('442 – col. 11 lines 51-59) and for decompressing at least the selected compressed video and audio data and for displaying the decompressed video ('419 – fig. 6 and 7) along with a selected number from zero to some larger number of items of

said status data on a video display ('419 – fig. 5, col. 10 lines 52-54) and for playing audio captured by said microphone on said speaker ('419 – col. 11 lines 28-38.)

Contact

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gary C. Vieaux whose telephone number is 571-272-7318. The examiner can normally be reached on Monday - Friday, 8:00am - 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thai Q. Tran can be reached on 571-272-7382. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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